

205

# CALIFORNIA STATE BOARD OF HEALTH Weekly Bulletin

GEORGE E. EBRIGHT, M. D.  
PRESIDENT

FRED F. GUNDRUM, M. D.  
VICE PRESIDENT

A. J. SCOTT, JR., M. D.



EDWARD F. GLASER, M. D.

ADELAIDE BROWN, M. D.

ROBERT A. PEERS, M. D.

WALTER M. DICKIE, M. D.  
SECRETARY AND EXECUTIVE OFFICER

Entered as second-class matter February 21, 1922, at the post office at Sacramento, California, under the Act of August 24, 1912.

Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917.

Vol. I, No. 50

JANUARY 27, 1923

GUY P. JONES  
EDITOR

## THE PREVENTION OF COMMUNICABLE DISEASES IN CHILDREN.

By WALTER M. DICKIE, M.D.

A physically handicapped child can not be educated properly. Health in school children is the first requisite. Any system of education which overlooks and neglects the health of the pupil works an injury and an injustice upon the child. Health comes first. Physical defects in children should be corrected before they enter school, and during school life every opportunity for the promotion of child health and every safeguard against the inroads of communicable diseases must be provided. The greatest thing in the world is human life. The next greatest thing in the world is education—spiritual, physical and intellectual. The foundation for all educational work rests upon the soundness of the human body. Unless the foundation is strong the whole structure of education will fall.

The people of California are awake to these facts, as is well demonstrated in the continued activity in the promotion of public health and physical education. This awakened interest began during war days, at the time of the first draft, when it became known that a large percentage of young Americans were unfit for military service because of their many physical defects. The realization of this fact constitutes perhaps the greatest single benefit that this

country derived through its participation in the World War. Official and unofficial health organizations sprang up everywhere during those eventful days, and have continued since that time without abatement. Whole communities are now organized for the promotion of health, principally child health. The schools have provided a remarkable field for this type of work, and boards of education throughout the state are not only starting new machinery for promoting the health of the school children, but they are also expanding and elaborating upon machinery that is already provided. Our citizens realize fully their duties and responsibilities in connection with this, our most valuable asset, the child. They realize that the health of the school child and his education are the most important things in all community life. Making children sound, wholesome citizens is the chief business of our civilization.

The factors that have to do with the general program in the promotion of child health are local. Nutritional problems, routine physical examinations, the teaching of personal hygiene, and similar factors, are, strictly speaking, within the province of the local educational authorities. The control of the communicable diseases, however, is absolutely and entirely within the province of health departments. The prevention of communicable diseases and their control are so important and have so much to do with the health and happiness of the child after he has developed into an adult that I wish to emphasize their importance to you at this time.



Diphtheria, scarlet fever, measles and whooping cough are the most disastrous diseases of childhood, and they are largely responsible for the development of harmful after-effects that manifest themselves in later life. During the past two years more than 50,000 cases of these four diseases have been reported in California. Eighteen thousand of these were cases of diphtheria, 11,000 cases of scarlet fever, 15,000 cases of measles and 6000 cases of whooping cough. Actually, there were many more cases of these diseases that occurred—probably twice as many. The 2000 deaths from these four diseases are relatively insignificant in comparison with the 100,000 cases which will probably constitute the principal factor in the production of many thousands of physically handicapped adults in California, each year, during the next decade. Dr. Victor C. Vaughn, one of the most reliable public health authorities in the country, says: "It is not oversanguine to claim that if measles, whooping cough, diphtheria and scarlet fever could be entirely suppressed, the average length of life would be increased at least ten years." Investigations recently conducted by some of our most eminent medical and public health authorities prove that the after-effects of these communicable diseases are very serious. Injuries inflicted on the kidneys, the nervous system, the circulatory system and the pulmonary system by the communicable diseases of early life are usually permanent. The remote effects of these diseases are not reflected in the death certificates of many patients, in which the cause of death is given as heart, kidney or pulmonary diseases. The real cause of death, a communicable disease contracted in childhood, is generally lost sight of.

The prevention of communicable diseases and their control constitutes an administrative problem. There must be public health machinery to conduct this work. Such machinery can not function properly, however, without the full cooperation of the general public. Voluntary action upon the part of parents can accomplish much in preventing the spread of the communicable diseases. Every sore throat should be regarded as serious, and no child suffering from a sore throat should be permitted to mingle with other children. Most communicable diseases of childhood manifest themselves, in the beginning, with the symptoms of a common cold. Children showing such symptoms should be kept away from other children as soon as the symptoms first appear. It is during the

early stages that most of these respiratory infections are most highly communicable. All parents and teachers should remember this fact. Their cooperation in the enforcement of simple control measures can assist public health authorities greatly.

Greater cooperation upon the part of physicians in the control of these diseases is also needed greatly. In fact, the greatest responsibility for the enforcement of measures in the control of diphtheria and scarlet fever rests upon the physicians who attend cases of those diseases. The medical profession must give careful attention to the official regulations for the control of diphtheria and scarlet fever. Without such cooperation public health authorities are helpless in reducing the prevalence of these diseases that have so much to do with the development of other diseases in adult life. Promptness in making diagnosis and in reporting, strict observance of quarantine during the whole period, stimulating the cooperation of the patient and his family in adhering to the regulations of the health department, are all of great importance in reducing the prevalence of these diseases. With the full support and unreserved interest of the profession, it is possible to obtain much greater results, which will reflect not only to the honor of medicine, but which will go far in maintaining our children's health and in making of them strong, sturdy, healthy citizens.

Bringing our children into healthy, happy, efficient and useful adult life is the ultimate goal of our whole civilization. Through cooperation in the prevention of communicable diseases we can accomplish much more than we are now accomplishing in reaching this much to be desired goal. Education is the driving power by which this goal may be reached; but the health of the human being is the machine, itself. I would urge you to throw out every safeguard in protecting this most valuable piece of machinery, in giving it every care, and making it the means for developing a better citizenry. The health and happiness of the people of California ten or twenty years from today depend very largely upon what we do today in the promotion of child health. If we save on the health of the child today, we may not suffer for it, but the child will suffer. We must not neglect the accomplishment of any activity that will make him a sound, substantial, useful citizen who will continually work for the advancement of human welfare in the community.



## VITAMINS IN ICE CREAM.

By M. E. JAFFA, M.S., Consulting Nutrition Expert, California State Board of Health.

When discussing vitamins in ice cream the opinion has been ventured that if the milk and cream incorporated in the manufactured product were from cows fed a vitamin rich ration that the potency of these respective vitamins would not be lowered in the finished article. On the other hand, if the milk and cream were from cows fed on a vitamin poor ration the ice cream would be correspondingly poor in the important dietary essentials.

It is very gratifying to note in the issue of the Journal of the American Medical Association for December 30, 1922, an article by Dr. A. H. Smith on "Vitamins in Ice Cream." The investigation was carried on in Dr. Mendel's laboratory with a view of ascertaining whether or not during the process of manufacturing the ice cream the potency of the respective vitamins would be lowered. The usual method of procedure was carried out for such studies and the results are interesting, valuable and at the same time confirm the opinion which has been held previous to such actual experimentation.

The summary of Dr. Smith's work is as follows:

Vitamin A was present in the typical samples of ice cream in such concentration that one may conclude that no noteworthy alteration in its potency is caused by pasteurizing or freezing. Normal growth was induced by 1 gm., of the ice cream, and ophthalmia was cured by 0.25 gm., containing 25 gm., containing 25 mg. of butter fat.

The vitamin B of the ice cream can be accounted for by the equivalent quantity of milk used in it. Freezing had no effect on the vitamin B in the ice cream used. The ice cream, which was made from pasteurized products, contained no significant quantity of vitamin C.

It is thus shown that the physiological activity of the respective vitamins is not injured by the manufacturing process and, furthermore, emphasizes the fact that pasteurization when carried on properly does not lower the potency of vitamin A or B but does to a certain extent lower the physiological activity or the potency of vitamin C.

## A CORRECTION.

In an article published in last week's Bulletin, entitled "Four Counties Organize Full-time Health Departments," it was stated that Dr. Lewis F. Badger had been appointed health officer for San Joaquin County. Dr. Badger has been appointed health officer for San Luis Obispo County, and is actively en-

gaged in the duties of his office. San Luis Obispo County has completed its full-time health organization, and two of the incorporated cities within the county have joined the health unit.

## EPIDEMIOLOGY

By W. H. FROST, M.D., Surgeon, U. S. Public Health Service.

*Definition and relation to other medical sciences.*—In its broadest sense epidemiology is defined as "the sum of knowledge of epidemic diseases," but while this definition is etymologically correct, it is not altogether in accordance with current usage. In the first place, the scope of epidemiology as ordinarily understood comprises diseases which are not "epidemic" in the usual sense, for example, such diseases as tuberculosis; on the other hand certain essential phases of the knowledge even of distinctly epidemic diseases—for instance, their symptomatology and morbid anatomy—are hardly included within the meaning of epidemiology, which refers more particularly to the phenomena of epidemic and endemic prevalence. In its more usual sense, epidemiology may be defined as the science or knowledge of the mass-phenomena of diseases, the manner of their natural occurrence and spread among the people, and the relation of these characteristic phenomena to the manifold conditions of heredity, habit and environment which determine them. This corresponds to the definition which Hirsch gives of geographical and historical pathology, as "a science which will give: firstly, a picture of the occurrence, the distribution and the types of the diseases of mankind, in distinct epochs of time and at various points of the earth's surface; and secondly, will render an account of the relations of these diseases to the external conditions surrounding the individual and determining his manner of life."

Although the above definitions may be considered as applying to non-infectious as well as to infectious diseases, the present discussion will be limited to diseases of specific infectious origin, a limitation adopted chiefly as a matter of convenience, to avoid the necessity of modifying the many general statements which are applicable only to the latter class of diseases. It will, however, be readily apparent that the principles which



apply to the epidemiological as contrasted with the experimental method of studying infectious diseases are equally applicable to the study of the mass-phenomena of other diseases.

Considering epidemiology in its relation to other phases of medical science, our present knowledge of infectious diseases comprises facts and theories developed as the result of study from various angles corresponding to more or less definitely specialized fields of investigation. The first requisite is a knowledge of the manifestations of various diseases in the individual, their symptomatology and morbid anatomy, since it is obvious that no progress can be made toward developing a knowledge of any disease until it is more or less clearly differentiated from other diseases, and also, that a clinical knowledge of disease is necessary in order that its importance to the individual affected may be fully comprehended. An appreciation of the relative importance of different diseases as factors in the general impairment of public health requires, in addition to the familiarity with their clinical effects, a more or less extensive knowledge of their frequency of occurrence in various demographic groups and in successive periods of time. The collection and compilation of these data fall within the province of vital statistics.

## MORBIDITY\*

### Smallpox.

Fourteen cases of smallpox were reported, from the following localities: Alameda 1, Fresno County 2, Modesto 1, Oakland 1, San Francisco 5, Santa Clara County 1, Ventura 2, Watsonville 1.

### Typhoid Fever.

Fourteen cases of typhoid fever have been reported, the distribution being as follows: Lake County 1, Los Angeles 3, Modoc County 2, Monrovia 1, Ocean-side 1, Sacramento 2, San Francisco 1, San Joaquin County 1, San Jose 1, South San Francisco 1.

### Epidemic Encephalitis.

Three cases of epidemic encephalitis were reported, San Francisco reporting 3 and Salinas 1.

### Rabies.

Orange County reported one case of human rabies.

### Anthrax.

Colusa County reported one case of anthrax.

\*From reports received to date for last week.

## COMMUNICABLE DISEASE REPORTS.

Disease	1922-1923				1921-1922			
	Week ending			Reports for week ending Jan. 20 received by Jan. 23	Week ending			Reports for week ending Jan. 21 received by Jan. 25
	Dec. 30	Jan. 6	Jan. 13		Dec. 31	Jan. 7	Jan. 14	
Anthrax.....	0	0	0	1	0	0	0	0
Cerebrospinal Meningitis.....	1	4	1	0	4	2	0	2
Chickenpox.....	81	167	151	158	61	123	130	97
Diphtheria.....	197	158	209	145	256	272	287	330
Dysentery (Bacillary).....	6	0	0	0	0	0	0	0
Epidemic Encephalitis.....	3	0	4	4	3	0	1	4
Gonorrhoea.....	61	127	165	54	67	132	129	68
Influenza.....	19	33	45	139	20	43	20	31
Leprosy.....	1	0	0	0	1	0	0	1
Malaria.....	2	1	3	0	1	2	2	0
Measles.....	32	63	62	87	15	11	23	25
Mumps.....	12	11	16	13	36	83	99	116
Pneumonia.....	162	125	151	125	143	99	96	102
Polio-myelitis.....	0	0	0	0	3	2	3	3
Rabies.....	0	0	0	1	0	0	0	0
Scarlet Fever.....	119	142	169	128	120	107	128	126
Smallpox.....	11	24	28	14	136	134	188	155
Syphilis.....	84	100	124	59	41	83	110	65
Tuberculosis.....	159	162	154	139	114	151	150	142
Typhoid Fever.....	9	9	13	14	11	9	5	7
Whooping Cough.....	52	85	123	102	30	29	50	38
Totals.....	1011	1211	1418	1183	1062	1282	1421	1312